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ABSTRACT

Environment plays an influential role in behavior. There is, however, often a discrepancy between the intended academic environment (as expressed by the institution in a variety of ways), and that perceived by the students. In order to explore this discrepancy, which may exist between the intended and the perceived institutional press, it is important to have an accurate measure of the environment. Most existing instruments do not use student perceptions to assess the school's environment but rely on other data sources. Accordingly, the Perceived Environment Profile (PEP) was developed for this purpose, based on Pace's College and University Environment Scales (CUES). PEP is a 55-item scale containing statements about high schools which are categorized into five sub-scales: Practicality, Community, Awareness, Propriety, and Scholarship. A pilot study, conducted to ascertain the most discriminating items, yielded 11 items for each sub-scale. Reliability estimates using the Kuder-Richardson Formula 21 yielded an average coefficient of +.86. PEP requires 20-30 minutes to administer and the Flesch regression formula indicates that it is of low level reading difficulty. It is concluded that in this study PEP demonstrated its potential value as a valid instrument to measure characteristics or the environmental press of the secondary school. (PR)

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THE DEVELOPMENT

OF THE

PERCEIVED ENVIRONMENT PROFILE (PEP)

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The influential role of environment on behavior is well known (Anastasi, 1958). Academic environments, as expressed by formal school objectives, are statements of intent which hopefully find expression in various curricular practices, services, and other school-related activities. These school objectives or statements of intent, define the intended institutional press of the school, and indicate the directions in which the school proposes to influence the behavior of its students. (Pace & Stern, 1958). Such academic environments, however, are only 'intended environments' unless they are so perceived by most or all members of the school community. In order to determine the discrepancy, if any, which exists between intended institutional press and perceived press, it is important to have an accurate measure of the environment.

The purpose of this study was to develop a scale which would measure differences in educational environments as perceived by students and teachers at the high school level.

Environment as used in this study refers to the cumulative rules, practices, activities, facilities and other features of a school which form an impression on students.

Existing environment scales such as the Organizational Climate Description Questionnaire (OCDQ) by Halpin and Croft (1963) describe school climate by measuring teacher and administrator characteristics. Neither the OCDQ nor Astin's (1963) Environmental Assessment Technique (EAT) which uses data from published sources (e.g. school population, intelligence level of students, etc.) use student perceptions to assess specific attributes of the school's environment. The High

School Characteristics Index (Stern, 1963) which does use student perceptions is long (300 items and 30 scales) and has been plagued by low reliability (Jones, 1968).

The PEP instrument which is based on Pace's (1963) College and University Environment Scales is a 55 item scale which contains statements about high school. The PEP has five sub-scales labeled Practicality, Community, Awareness, Propriety, and Scholarship. Students are asked to respond as to whether each statement is generally true or generally false about their school. A sample statement from the Community Scale reads as follows: "The teachers and students in this school try to make sure that no students get left out of things." This statement was answered as true by 80-89% of the students in one school. Only 10-19% of the students of another school saw this item as characteristic of their institution.

Since the PEP is concerned only with aggregate judgments of the students, its purpose is to describe institutional environments rather than individual students. Therefore a given statement within a sub-scale is considered to be characteristic of a school only if 66% or more of the students answer in the keyed direction. One point is added to a school's scale score for each item which garners this concensus. Similarly, school-wide sub-scale scores are reduced by one point if 66% or more students answer a particular statement against the keyed direction. This 2 : 1 ratio was arbitrarily set by Pace for the CUES and it was adopted as a reasonable concensus. Twenty points are added to all scores in order to eliminate minus figures.

METHOD

Packets of approximately 150 preliminary statements printed on 3 x 5 cards were progressively distributed to nine educators who reviewed them for purposes of verbal refinement and clarity. Weak, unpopular items were eliminated.

The remaining statements were then given to three independent judges. Each judge was asked to place each statement card under one of the five descriptive categories provided. Items which lacked placement concensus were rejected. This internal content validity check resulted in the elimination of several more items.

The remaining items were then randomly distributed across three forms of the PEP. A pilot study using these three forms was then conducted in two secondary schools. One was a rural school of 400 students and the other was a regional school of approximately 1,000 students. Acceptable face validity was also established at this time. Face validity is a desirable feature of any scale. If a scale appears inappropriate, silly or irrelevant, poor cooperation may be the result, regardless of the scale's actual value. The PEP was judged to have adequate face validity based on its acceptance by guidance counselors and principals to have it administered in their schools and also by the serious, positive reactions from the student and teachers who participated in the study.

The main purpose of the pilot study was to identify the most

discriminating items in each of the five sub-scales. The pilot data was analyzed using a normalized biserial coefficient of correlation (using high and low-scoring schools as cutoff points) and also by a simple subtraction of the proportion of keyed responses in the lower-scoring school (on each sub-scale) from the proportion of keyed responses in the higher-scoring school. Both methods yielded nearly identical rankings. The eleven most discriminating items in each sub-scale were chosen for the final form.

This form was then administered to the junior classes of six high schools located in Massachusetts and New Hampshire. Both urban and rural, regional and independent schools were represented.

Construct validity was determined to the extent that the scale discriminated and yielded significantly different scores on each sub-scale for different schools and for the students and teachers of given schools as well. Table 1 reports data for the Awareness sub-scale.

Table 1 about here

Because of the nature of the PEP which seeks a low variance of scores within each school, the usual reliability methods which measure responses from a signle institution are inappropriate. However, when analyzing data from different institutions, variance in scores would support the basic assumptions of variable environmental presses, and the usual reliability formulas may be applied.

Reliability estimates using the Kuder-Richardson (21) yielded an average coefficient of +.86. Since the K-R (21) utilizes scores from a single administration of the scale, the reliabilities are sometimes slightly overestimated. Table 2 presents the means, sigmas and reliability coefficients of PEP variables.

Table 2 about here

The various degrees of relationships between the PEP sub-scales are demonstrated by the intercorrelation matrix shown in Table 3. These relationships closely replicate the intercorrelations found in Pace's data.

Table 3 about here

The accuracy of the results of any scale or test is, in part, a function of its readability. In applying the Flesch regression formula (Chall, 1958) to the PEP in order to ascertain its level of reading difficulty, a calculated score of 78 was obtained. This classifies the PEP as "fairly easy" reading material and would or should, by definition, present no reading problem to the average or even below average high school junior.

The PEP takes 20-30 minutes to administer.

The results of this study clearly suggest that a great deal of diversity exists among secondary schools. Schools that are seemingly similar due to variables of size, geographic location, composition

of student body, etc. do in fact house a variety of different and measureable characteristics. The Perceived Environment Profile has demonstrated its potential value as a valid instrument to measure these characteristics or the environmental press of the secondary school.

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TABLE 1

ANALYSIS OF VARIANCE FOR AWARENESS SCORES OF TEACHERS AND STUDENTS FROM SIX SCHOOLS ADJUSTED FOR DISPROPORTIONALITY

Source	df	SS	MS	F
Schools	5	111.05	22.21	8.46***
Students-Teachers	1	26.08	26.08	9.93***
Schools x Students-Teachers	5	52.19	10.44	3.98**
Error	814	2136.36	2.62	

***p < .001
**p < .01

TABLE 2

MEANS, SIGMAS, AND RELIABILITY COEFFICIENTS OF PEP VARIABLES

STUDENT DATA

Scale	Mean	Sigma	K-R(21)
Practicality	22.3	2.2	.71
Community	22.2	3.0	.95
Awareness	21.0	2.5	.75
Propriety	19.3	2.9	.90
Scholarship	20.7	4.0	.99

TABLE 3

INTERCORRELATION OF PEP SCORES BY SCALE

STUDENT DATA

Scale	Practicality	Community	Awareness	Propriety	Scholarship
Practicality	1.00	.12	- .48	.65	- .16
Community		1.00	- .07	.63	.42
Awareness			1.00	- .14	.71
Propriety				1.00	.39
Scholarship					1.00